FIG._1A

FIG._1B

FIG._1C

FIG._1D

Integrin Heterodimer

FIG._1E

MALRVLLLTALTLCHGFNLDTENAMTFQENARGFGQSVVQLQGSRVVVGAP

QEIVAANQRGSLYQCDYSTGSCEPIRLQVPVEAVNMSLGLSLAATTSPPQL

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ITDGEKFGDPLGYEDVIPEADREGVIRYVIGVGDAFRSEKSRQELNTIASK

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AITSNGPLLSTVGSYDWAGGVFLYTSKEKSTFINMTRVDSDMNDAYLGYAA

AIILRNRVQSLVLGAPRYQHIGLVAMFRQNTGMWESNANVKGTQIGAYFGA

SLCSVDVDSNGSTDLVLIGAPHYYEQTRGGQVSVCPLPRGQRARWQCDAVL

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PFEKNCGNDNICQDDLSITFSFMSLDCLVVGGPREFNVTVTVRNDGEDSYR

TQVTFFFPLDLSYRKVSTLQNQRSQRSWRLACESASSTEVSGALKSTSCSI

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ELPVKYAVYMVVTSHGVSTKYLNFTASENTSRVMQHQYQVSNLGQRSLPIS

LVFLVPVRLNQTVIWDRPQVTFSENLSSTCHTKERLPSHSDFLAELRKAPV

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FIG._1F

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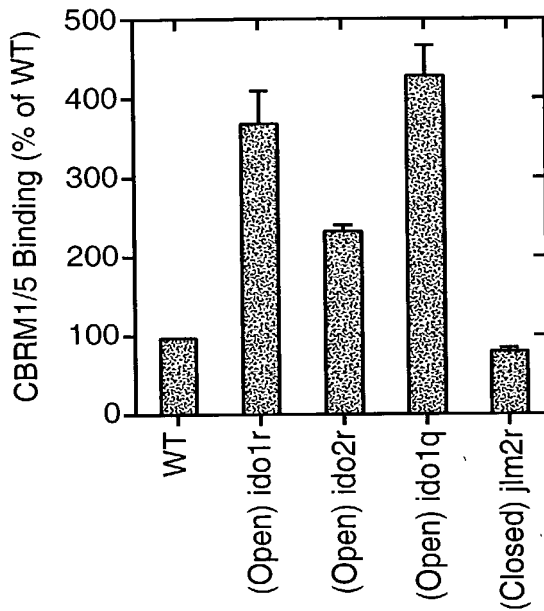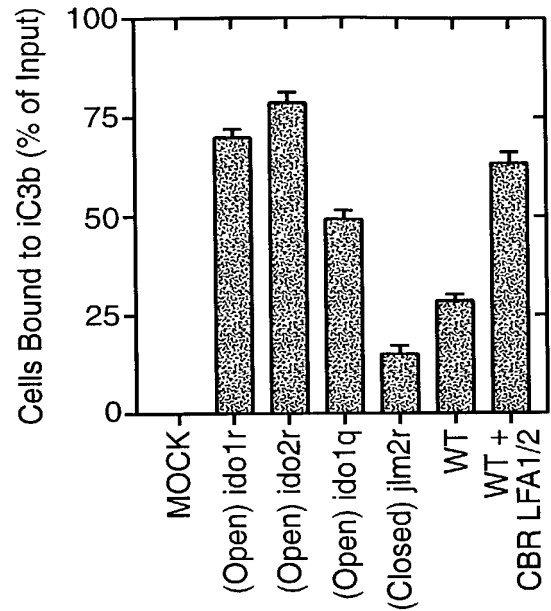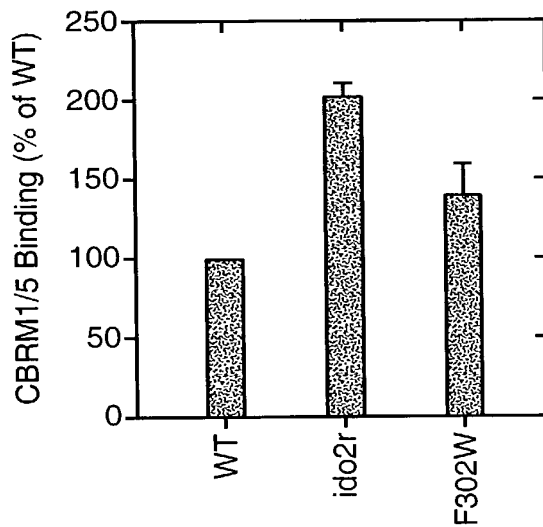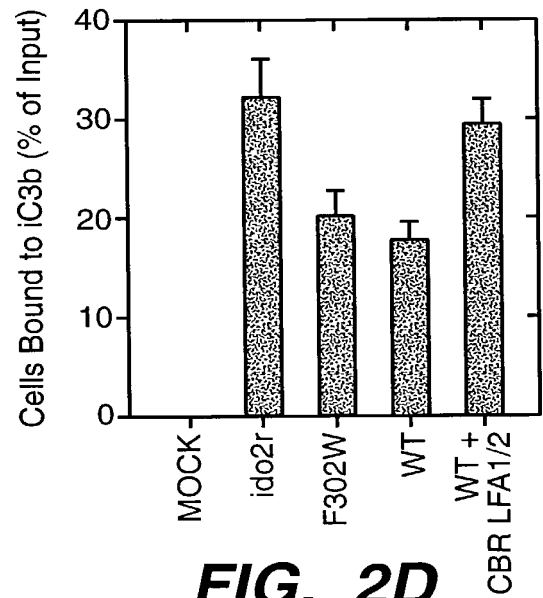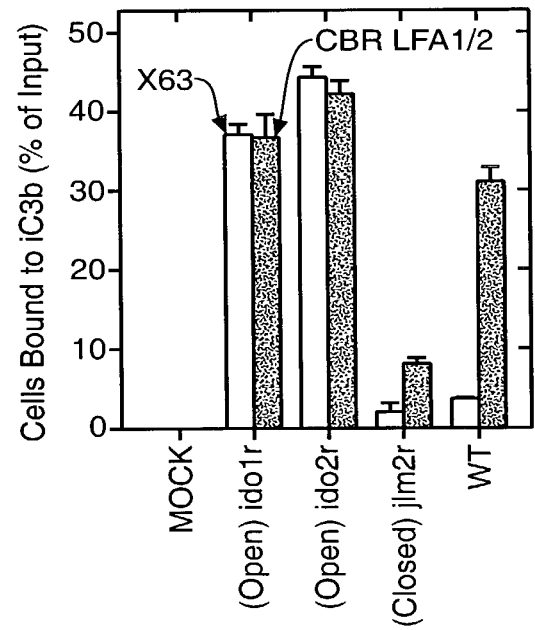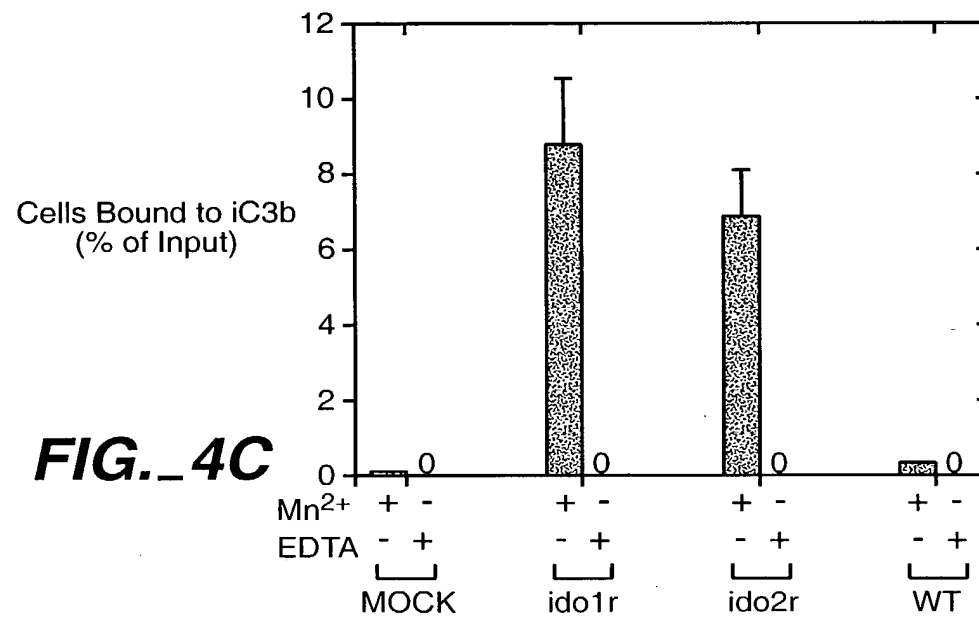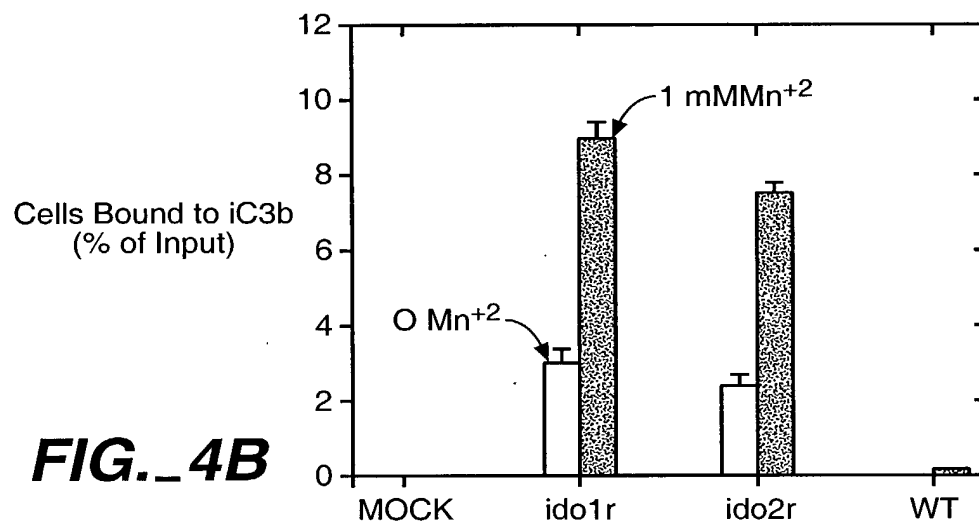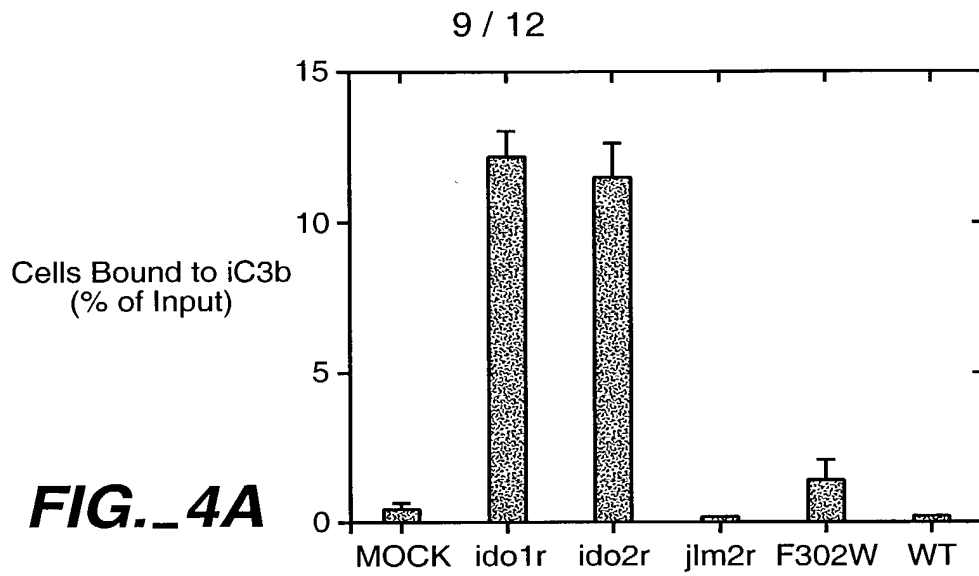
FIG._1G-1

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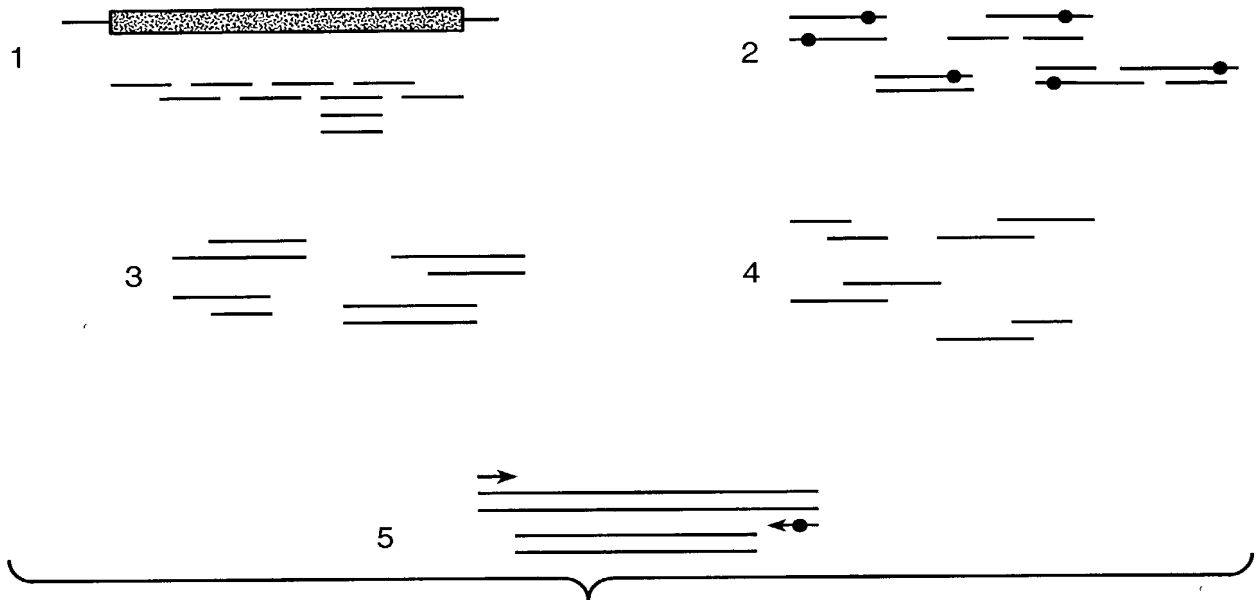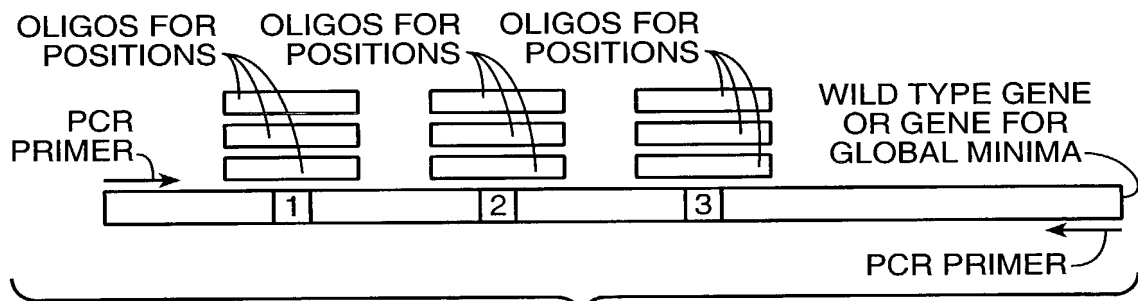
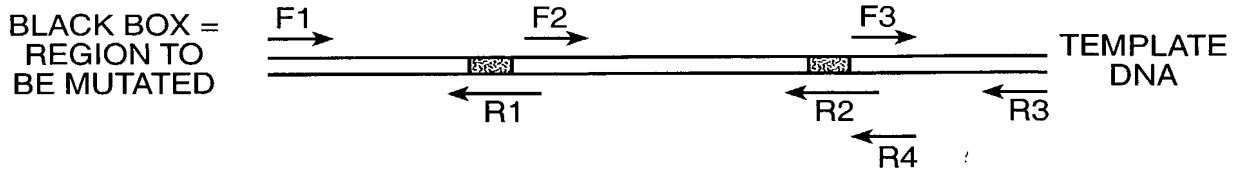## FIG._1G-2

FIG._2A

FIG._2B

FIG._2C

FIG._2D

FIG._3A

FIG._3B

FIG._3C

FIG._3D

Cells Bound to iC3b
(% of Input)

FIG._4A

MOCK   ido1r   ido2r   jlm2r   F302W   WT

Cells Bound to iC3b
(% of Input)

1 mMMn^{+2}

O Mn^{+2}

FIG._4B

MOCK   ido1r   ido2r   WT

Cells Bound to iC3b
(% of Input)

FIG._4C

Mn^{2+}	+	-	+	-	+	-	+	-
EDTA	-	+	-	+	-	+	-	+

MOCK   ido1r   ido2r   WT

FIG._5

OLIGOS FOR POSITIONS

OLIGOS FOR POSITIONS

OLIGOS FOR POSITIONS

PCR PRIMER

WILD TYPE GENE OR GENE FOR GLOBAL MINIMA

PCR PRIMER

FIG._6

BLACK BOX =
REGION TO
BE MUTATED

F1   F2   F3   TEMPLATE
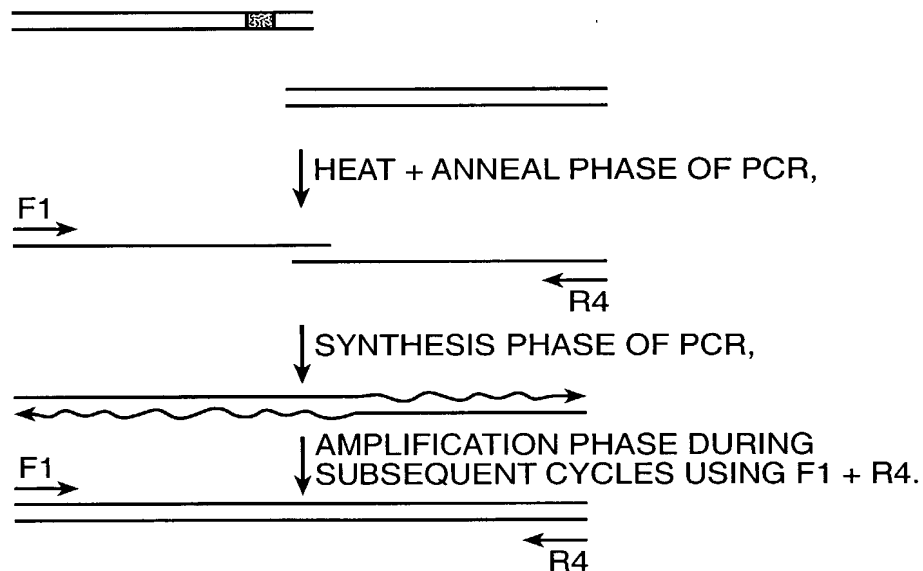DNA

R1   R2   R3

R4
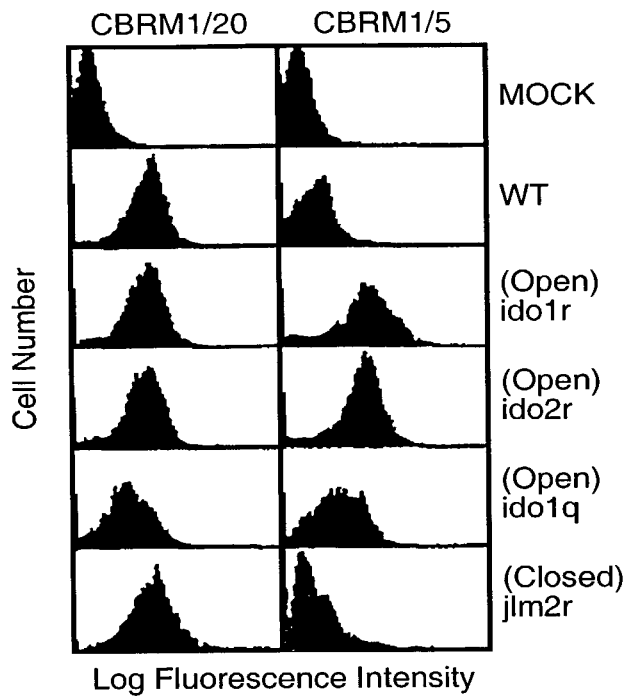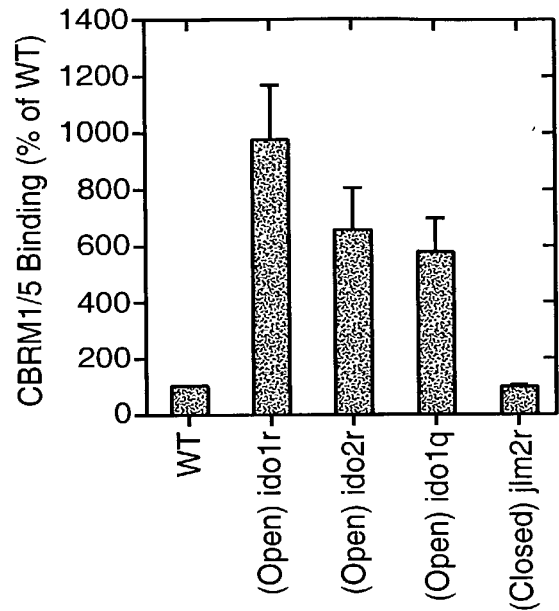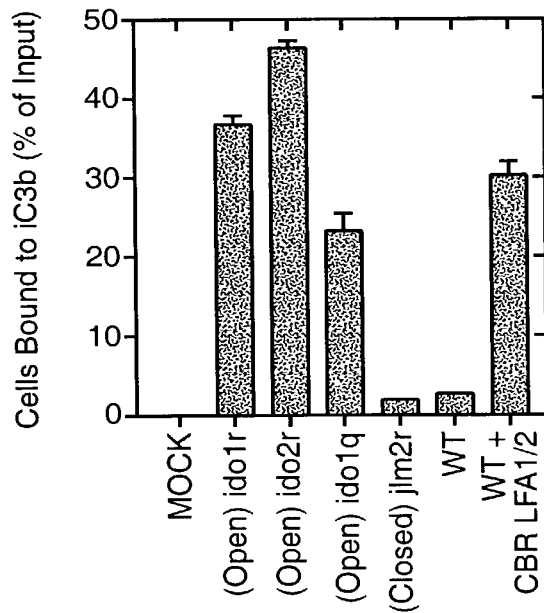
STEP 1: SET UP 3 PCR REACTIONS:

         PRODUCTS:

TUBE 1:

TUBE 2:

TUBE 3:

STEP 2: SET UP PCR REACTION WITH PRODUCTS OF TUBE 1 +
PRODUCTS TUBE 2 + F1 + R4.

      ↓ HEAT + ANNEAL PHASE OF PCR,

F1

R4

      ↓ SYNTHESIS PHASE OF PCR,

F1   ↓ AMPLIFICATION PHASE DURING
      SUBSEQUENT CYCLES USING F1 + R4.

R4

STEP 3: REPEAT STEP 2 USING PRODUCT FROM STEP 2 + PRODUCT
FROM STEP 1, TUBE 3 + PRIMERS F1 + R3.
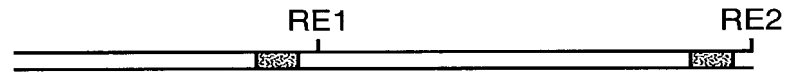
FIG._7
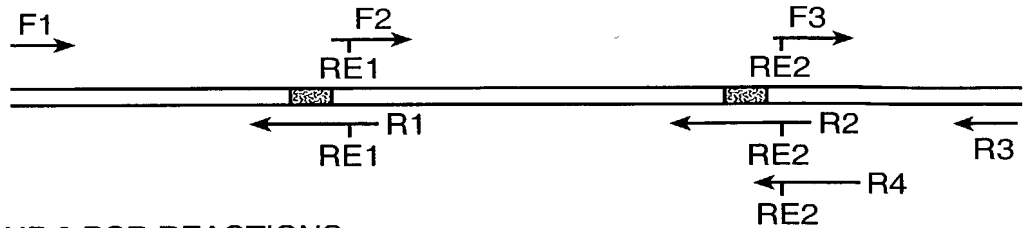
STEP 1: SET UP 3 PCR REACTIONS:

TUBE 1:

RE1

TUBE 2:

RE1   RE2

TUBE 3:

RE2

STEP 2: DIGEST PRODUCTS FROM STEP 1 WITH SUITABLE RESTRICTION ENDONUCLEASES.

STEP 3: LIGATE DIGESTED PRODUCT FROM STEP 2, TUBE 2 WITH DIGESTED PRODUCT FROM STEP 2, TUBE 1.

RE1   RE2

STEP 4: AMPLIFY VIA PCR LIGATED PRODUCTS OF STEP 3 WITH F1 + R4.

RE1   RE2

STEP 5: DIGEST AMPLIFIED PRODUCT OF STEP 4 WITH RESTRICTION ENDONUCLEASE #2.

RE1   RE2

STEP 6: LIGATE PRODUCT FROM STEP 5 WITH PRODUCT FROM STEP 2, TUBE 3.

RE1   RE2

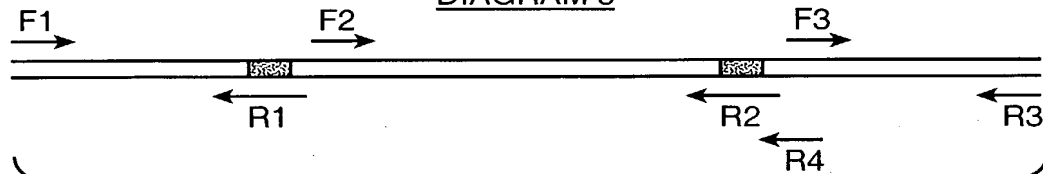STEP 7: AMPLIFY PRODUCT FROM STEP 6 WITH F1 + R3.

FIG._8

DIAGRAM 3

FIG._9